THE VETERINARY RECORD

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The Board of Agriculture.

At the Council Meeting on Wednesday last, the letter from the Secretary of the Board of Agriculture, which we reprint on page 608, was received in reply to the letter and Report sent by the Council.

The Council after some discussion decided that the special committee entrusted with this matter should draw up a reply to be sent to the secretary. It will be noticed that Mr. Elliott makes no effort to answer the complaints of the College, but attempts to evade the whole question by pitting the "local practitioner" against the veterinary advisers of the Board. This is a singularly unfortunate move because the local practitioner has only too many grievances of his own, and no veterinary surgeon, except the few who are drawing fees for sending the viscera of pigs to London, will approve of the debasement of the whole profession. Doubtless the Board would be glad to accept all the assistance the profession can give towards the suppression of disease, but in all things there is a mutual give and take. We are not prepared to do all the giving, and until the Board of Agriculture see fit to officially acknowledge a "veterinary" department, with its necessary corollary of a veterinary director, the practitioner who assists them will be a traitor to his calling.

The argument submitted by the Council is unanswerable, but it must be forced into prominence, and veterinary surgeons must use their influence with Parliament. Any member who has not a copy of the Report may obtain it by application to the Secretary at Red Lion Square, and should forward it to his M.P. with a covering letter asking for consideration. The Council sent to the Secretaries of local societies a supply of Reports. These, by some misunderstanding, have not been distributed, and it is to be hoped that the Secretaries will not longer delay to forward them to their members. Now that the press has taken the subject up is our opportunity, and delay means the loss of a good case and the probability of failure of a good cause.

The Council can only act in this matter with probability of success if assisted by the active intervention of the profession, and this intervention should take the form of parliamentary pressure applied through the local representatives. From the Board we may expect no redress—our hope is in publicity and through parliamentary action.

Tuberculous Meat.

Provision against the sale of tuberculous meat is not the business of veterinarians, but as the easiest way to protect human beings from disease in bovines is to stamp out the disease in the animal we are interested in the question.

Legislation for suppressing tuberculosis amongst animals is not difficult. Putting the law in force would be. The holders of pedigree stock are a powerful body and would not willingly assist. The butchers are a powerful political body and not unnaturally object to the loss of a carcase found to be tuberculous.

In some continental countries—Hungary for instance—tuberculosis is rigidly looked after and diseased carcases confiscated. The butcher loses nothing because the law gives him a claim on the seller. This is only just. The butcher buys for one purpose—meat. He should be supplied with an animal fit for meat, and the seller should suffer if the animal were not what it purports to be. By throwing the loss on the farmer of all animals sold to the butcher for meat which are found tuberculous, the question of suppression is simplified. The farmer would have the right to report his cases, have them killed and draw his compensation. If he sold to the butcher he would do so at his own risk, and the butchers would be invaluable detectives all over the kingdom. This suggestion seems to us worthy of futher consideration, as it is not unjust to anyone, and it would facilitate the work both of the veterinary and medical officers.

The American Sheep Disease.

Mr. Pottie has replied in *The Scottish Farmer* to Professor McCall, but affords no help towards the elucidation of the mystery. That the American sheep arriving here show in some cases a disease called by Mr. Pottie tuberculous, and by Professor McCall parasitic is all we know as yet. A question has been asked in the House of Commons and Mr. Herbert Gardner is reported to have said that the veterinary experts of the Board of Agriculture are investigating the matter. He also said something about the parasites in the "intestine." This still further clouds the question, because neither Mr. Pottie or Professor McCall have mentioned any intestinal lesion, they found pulmonary tubercles. Perhaps the Board are investigating the wrong disease, or what is more probable—the new lay head of the department in writing out Mr. Gardner's reply misunderstood the answer of the professional officer and from his own inner consciousness connected parasites with the intestines—as most laymen would do.

The importation of these sheep can be easily stopped. The disease they suffer from is not scheduled, but this is of no consequence. It is a disease of the lungs, and the Board may call it "suspicious" or "resembling pleuro-pneumonia" and then they may order slaughter at the place of landing.

CASES AND ARTICLES.

MYCOTIC GASTRO-ENTERITIS IN THE DOG.

By E. Wallis Hoare, F.R.C.V.S., Cork.

This very fatal affection has not received much attention in literature bearing on canine pathology, although its occurrence is, comparatively speaking, familiar to those engaged in treating the diseases of the dog. Many of such cases are attributed to irritant poisoning, and indeed to a casual observer the clinical phenomena presented would lead him to this opinion, as the sudden appearance of the symptoms, the evidences of gastro-intestinal irritation, the rapid course of the affection and the lesions disclosed at the necropsy would point to the ingestion of a violent irritant. Analysis, however, fails to discover any of the recognised poisons, and we are forced to enter into an investigation of the nature of so very fatal an affection in the canine species.

The clinical history is fairly constant in its details in the majority of cases, the prominent symptoms being the sudden occurrence of hæmorrhagic diarrhœa, profuse in quantity and dark in colour, great weakness, pallidity of the visible mucous membranes, frequent vomition, excessive thirst, and death occurring more or less rapidly, sometimes within a few hours, mostly in less than a day.

On referring to my clinical case book I find that the last case of this affection coming under my observation was in a valuable St. Bernard dog, two years old. He was found in the morning in an extreme state of prostration, and affected with very profuse hæmorrhagic diarrhœa, the surface of the body was pallid, and in a short space of time he was unable to raise even his head and died in about five hours. I conducted the autopsy that evening and found the stomach distended with decomposed meat possessing an abominable odour. The gastric mucous membrane was inflamed, the intestines throughout their whole length were inflamed and filled with fluid of a chocolate colour, in some portions the contents were more distinctly hæmorrhagic in appearance. The whole cadaver seemed approaching the stage of decomposition and was most repulsive to examine.

This dog had been feeding on the refuse from an hotel which was brought to the place as feeding for pigs. In other cases I could not trace the origin of the decomposed material but the autopsies revealed similar appearances, and when we consider the peculiar tastes displayed by many dogs in the selection of this form of ingesta, it is not difficult to account for the presence of the decomposed material in the alimentary canal. In some instances vomition may be absent, in others it is a prominent symptom.

Taking a logical view of our present knowledge of the affection, it would appear probable that the poison formed in the decomposed material is not always of the same nature or constant in its virulence, or perhaps it may be that susceptibility to the poison varies in different individuals. It is clear that some dogs can ingest the most repulsive material and develope no symptoms afterwards. In that excellent work "The Pathology and Therapeutics of the Domestic Animals" by Friedberger and Fröhner, we find an elaborate and extensive notice of this affection.

It is defined as "An intestinal affection accompanied by general disturbances produced through the invasion of pathogenic micro-organisms and through the resorption of poisonous ptomaines." These ptomaines offer a most interesting study, and it would appear that many cases of suspected poisoning, in which chemical analysis fails to reveal the existence of any toxic agent, may be ascribed to their action.

In one case coming under my care, which showed the lesions usually present in cases of mycotic or septic gastro-enteritis in a dog, sent in from a country town, a chemical analysis discovered the presence of *veratrine* in the viscera, after the analyst had exhausted all tests for other poisons. It is probable, however, that in reality this poison was a ptomaine which reacted in a similar manner to veratrine, because we are aware that there are groups of these ptomaines which possess the properties of certain alkaloids and active principles, as well as being very similar in chemical composition, thus we have cadaveric alkaloids similar to curare, atropine, muscarine, digitalin, and according to Panum there is one resembling morphine. This shows a sort of analogy between animal and vegetable products which is interesting, and in passing we may draw attention to the tendency in the science of therapeutics of the present day to the employment of animal material in the treatment of disease, *e.g.* thyroid extract, supra-renal capsules, bone marrow, pituitary body, etc. Who knows what further researches in this field may bring forth?

But to return to our subject, we find that Panum (Virchow's Archives) injected intravenously in the dog some of the material extracted from decomposed meat, and observed similar symptoms to those of mycotic gastro-enteritis, and similar lesions at the autopsy. In man, accidents by poisoning from meat and sausages have also occurred, which, according to Bollinger, are septic inflammations of the intestinal mucous membrane due to mycotic poisons. These poisons are classified as *ectogenous*, or those formed post-mortem, and *endogenous*, or those produced by meat coming from diseased animals.

Ectogenous poisons may occur in tainted sausages or in fish. They are believed to be produced by special micro-organisms which generate ptomaines, the latter not being destroyed by cooking.

Endogenous poisons also depend on micro-organisms and their ptomaines, derived from the ingestion of flesh of animals affected by puerperal septicæmia etc.

With reference to treatment we cannot boast of much success as the patients are usually approaching a state of collapse when brought for advice. It is useless to try and remove the offending material by the administration of emetics, as the injury has already been done, and prostration is extreme. Com-

pound tincture of camphor, with port wine and small doses of creolin seem to give relief. Theoform is also well worthy a trial as it often gives excellent results in cases of gastric and intestinal irritation. If pain be distressing, the Tr. morphinæ et chloroformi (chlorodyne) will be indicated.

The greatest difficulty in the way of treatment is the differential diagnosis between this septic form of gastro-enteritis and that due to the action of irritant poisons, if the case is brought, as frequently occurs, without a reliable history.

The owner usually inclines to the belief in irritant poisoning as being the most likely under the circumstances, but is often disgusted when the analyst fails to discover the toxic agent although receiving a substantial fee.

It seems probable that some of those obscure cases of gastro-intestinal catarrh in horses, complicated with meningitis, sudden in their appearance and always fatal in their termination, may be ascribed to the formation of ptomaines from the presence of certain fungi ingested with the food, such as moulds, rusts etc. These may induce the decomposition of alimentary matters and produce ptomaines. In a future article I propose to give the clinical history and pathological anatomy of a series of these cases which occurred in one district with, however, only a probability of the cause, as at the time I did not make an examination of the fodder. They exactly corresponded to the mycotic gastro-enteritis, with elevation of temperature and grave cerebral symptoms described by German veterinarians as due to the ingestion of spoiled foods.

VETERINARY SOCIETIES.

YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

The spring quarterly meeting of the Association took place at the Queen's Hotel, Leeds, on Friday, April 26th, Mr. James Cooke, of Scarborough, (President) in the chair.

Letters of apology for non-attendance were read by the Hon. Sec. (Mr. Frank Somers) from Professors Williams, Penberthy and Pritchard.

The Hon. Sec. also announced that letters had been received from the following Veterinary Medical Societies agreeing with the resolutions passed at a special meeting of the Association in regard to the Board of Agriculture and the veterinary profession :—Eastern Counties, Lancashire, Royal Counties, Irish, Lincolnshire, National, South Durham, North Yorkshire, and Royal Veterinary College, also from the Royal College of Veterinary Surgeons.

Nominations and Elections.

Mr. G. E. Bowman, Leeds, nominated Mr. G. Bowes, Leeds, as a member of the Association, and the chairman nominated Mr. Charles Lang, Bridlington. The following gentlemen were now elected members: Mr. C. S. Smith, Barnsley, proposed by Mr. Bowman and seconded by Mr. A. W. Mason; Mr. J. W. Lazenby, proposed by Mr. Scriven, and seconded by Mr. Clarkson; and Mr. Holden, Scarborough, proposed and seconded by Mr. Scriven and the Chairman.

Votes of Condolence.

The Chairman said he regretted that since their last quarterly meeting they had lost by death a member of their Association in the person of Mr. Anderton, of Skipton, and he moved a vote of condolence with the family of the deceased gentleman.

Mr. A. W. Mason seconded, and pointed out that Mr. Anderton's diploma dated from 1861, though for many years prior to that time he was in the profession. Mr. Anderton had been a member of Council, took a great deal of interest in the Yorkshire Association, and had its welfare thoroughly at heart. The resolution was carried unanimously.

The Chairman further remarked that the veterinary profession had recently lost by death a very prominent member. He alluded to the late Mr. Thomas Greaves, of Manchester, who always took a great interest in everything relating to veterinary matters, and whose death would no doubt prove a great loss to the profession. He was a gentleman who did a great deal for the profession, and his genial manners and sympathetic nature won the esteem of everybody who came into contact with him. It was his pleasure and privilege to have been a pupil of Mr. Greaves some years ago, and he knew him to be one of the best sort possible, not only as a veterinary surgeon but also as a man.

Mr. Mason endorsed the Chairman's observations, and added that he went over to Manchester to pay a last tribute of respect to the memory of the deceased gentleman. The funeral was attended by nearly the whole of the members of the veterinary profession in Manchester. He noticed from the Register that Mr. Greaves' diploma went back as far as 1841. Mr. Greaves had been president of their College, and for many years a member of the Council, attending the meetings regularly up to the time of his failing health. He was always ready to do a good and kindly action for any member of the profession.

Mr. Scriven also bore testimony to the worth of the deceased gentleman who he said was not only a gentleman, but a brilliant practitioner.

The resolution was agreed to with unanimity.

The Dating of Horses' Birth Certificate.

Mr. Pickering then brought before the meeting the question of horses' birth certificates. He said he certified thoroughbreds from January 1st, and half-breds from May 1st. Recently he was asked to examine a four-year-old chestnut, and, following the general rule observed in the profession, he gave a certificate that the animal was rising four, tho' as a matter of fact he knew it was over four. He dated the certificate from May 1, the horse was the subject of negotiation, and complaint was made of the description given on the certificate; the dealer in the transaction saying that he had bought the animal as a four-year-old, and that all horses' ages now dated from January 1. Ultimately, however, the horse was accepted by the buyer, and a veterinary surgeon at Aldershot said that his (Mr. Pickering's) certificate was given in right way. He now wished to know if the date of ages had been altered or not.

The Chairman :—Not to my knowledge.

Mr. Bowman said he examined a good many horses, and if he considered a horse a four-year-old he described it so. For show purposes he believed the age dated from January 1st, as in the case of thoroughbreds.

Mr. Mason thought the subject needed no discussion, for thoroughbreds dated from January 1st and half-breds from May 1st.

Mr. Bowman did not think that Mr. Pickering had done wrong.

The subject then dropped, with the understanding that professionally there had been no alteration in the dates.

Exhibition of Specimens.

The members spent some time in examining and discussing a specimen of an enlargement underneath the lumbar vertebra of a 14 year old cart horse, submitted by Mr. Greenhalgh, (Leeds). The case was a very interesting one, but no definite conclusion was arrived at as to the cause of the enlargement. The discussion was adjourned till the next meeting, and in the meantime Mr. Greenhalgh said he would obtain the permission of the Yorkshire College authorities, to whom he has presented the specimen, to make a section of the vertebra.

Mr. S. Wharaam showed fractures of the axis in a cow and of the humerus in a mare, and was accorded a warm vote of thanks for the exhibits.

A Personal Explanation.

The Chairman wished to correct a passage in his speech about the annual meeting of the Association reported in the veterinary journals. It would, he observed, be remembered that on that occasion he spoke of the letters which had appeared in the lay press respecting the recent restrictions imposed upon students, the writers of those communications stating that the restrictions would be to the detriment of the colleges and the public in future, and that veterinary surgeons would not be equal to the demand. According to the report of the speech, he was supposed to have agreed with that statement. What he said was quite the reverse. He stated that the writers of those letters had too much sympathy with the public, and that the sympathy expressed ought to be with the veterinary surgeons, and that if the present system of giving gratuitous advice and quackery were continued, the services of veterinary surgeons would only be required in exceptional cases in the future, as the public would be sharp enough to treat the minor ailments of animals themselves.

The Secretary concurred that the published report of Mr. Cooke's speech was different from what he uttered.

LIGHTNING AND ITS EFFECTS.

By Mr. S. Wharam, Leeds.

Mr. President and Gentlemen,—The subject I am bringing to your notice to-day is one of more importance to veterinary surgeons than is generally supposed, and one that I believe has not received the attention it deserves at our hands.

I have not been able to find in any one of our text books mention of the subject. Fröhner and Freidberger in their Pathology and Therapeutics Special to the Domesticated Animals, give a short account of the effects of lightning, and Mr. G. A. Banham read a paper on Jan. 24th, 1881, before the Norfolk and Eastern Counties V.M.A. on the same subject, but what I consider the most important portion of a paper of this class, namely, the opinions and experiences of the members of a society like this, were unfortunately not published with Mr. Banham's paper, and for that reason and the time that has elapsed since any of our society's have discussed the subject, I feel justified in introducing it to your notice.

The name electricity is derived from a Greek word meaning amber, and was discovered and named by Dr. Gilbert, of Colchester. In the year 1600 he published the Tractatus de Magnete, where he gives a list of substances which he found to possess the same property as amber, such as sulphur, sealing wax, and glass.

It is not my intention to give you an account of what has taken place from that date to this; we all of us know the very important and varied uses to which electricity is now applied, and yet our knowledge and our application of it is considered to be merely in its infancy. However, I must refer you to the abundant literature on this subject, and will commence at once to consider the effects of lightning on living organisms.

Unfortunately in this country little can be drawn from statistics, but in France in the period from 1835 to 1863, 2238 persons were killed by lightning, while between 1854 to 1864 inclusive 967 persons were killed. In the year 1864 alone there were 87 killed, 61 males and 26 females.

In Prussia where registration is compulsory the deaths caused by lightning in 1880 were 819 persons. (*Brit. Assos. Reg. Aug.*)

Children appear to escape this mode of death more than adults (*Chemical News*, 1865, July 7 and Dec. 8) which is no doubt due to the difference in height.

I think it is only reasonable to suppose that a larger number of animals than anyone would imagine are killed or injured every year by lightning, for at the seasons when thunderstorms are most prevalent, a very large number of animals are out in the fields and therefore more liable to be struck. When a thunderstorm occurs the majority of people take shelter, but it is impossible to place animals under such favourable conditions, and comparing the number of them exposed in agricultural districts with the number of persons, it is evident that the proportion of animals struck must be considerable.

Cause of Death. Electricity appears to act fatally by producing a violent shock to the brain and nervous system. In general there is no sense of pain and the animal falls at once into a state of unconsciousness.

Injuries &c. Wounds and burns are sometimes met with, the wounds in human beings have commonly been lacerated punctures. In the case of a person that was struck but not killed a deep wound was produced in one thigh almost laying bare the femoral artery. (*Taylor's Jurisprudence.*)

I have examined in several cases the wood of trees which have been struck by lightning, and it has presented the appearance of rending by mechanical force, but I do not remember seeing any mark of burning.

Burns are occasionally met with, but in the majority of cases there is singeing of the hair or wool, in some instances a black mark, the result of burning the hair.

Blindness has frequently been caused by lightning. In a case of blindness in a horse attributed to lightning, the loss of vision in one eye was complete, the eye presented a slight opacity of the cornea, the head and neck were also drawn to one side. In another instance a man took shelter under a tree and he felt as though a flash had struck him in the face, he did not fall, but became almost blind and loss of sight supervened.

Many instances are on record where persons have had their eyesight improved. According to Zootynk, lightning fell on the church of St. Mark at Roveredo on the 13th Aug., 1783. It burnt the dress of the priest, aged 84, who was saying mass, but he was enabled to read without his spectacles after it.

An instance of the cure of blindness happened to a Mr. Gordley, an actor at the Surrey Theatre, who had been deprived of the use of his right eye, but recovered it again after a flash of lightning which fell near where he was standing. (*Banham, Vety. Journal*, vol. 12, p. 299).

Paralysis is the condition most commonly met with. Animals are sometimes found in a state of insensibility, no doubt the result of concussion of the brain, if they recover consciousness and are able to rise they suffer from paralysis and other symptoms of nervous disorder. I have seen several cases of paraplegia in horses supposed to have been the result of a stroke of lightning, and in each case the animal has either recovered in a few days or gradually become worse, even under the best conditions and treatment.

Cases are recorded of paralysis being cured by a flash of lightning and I have heard of one case where a man

affected with rheumatism was cured after receiving a slight shock.

Abortion frequently takes place in animals after a storm, probably from fright. This seems to be more common in cows than in mares. Entire herds of pregnant cows have been known to abort, whilst the mares remained unaffected. (*Banham, Vety. Jnl.* Vol. 12, p. 299.)

Fractures of the bones have not been commonly observed, but several instances have occurred.

Tetanus resulted in two days from a severe shock received by a boy. (*Med. Times & Gazette*, 1855, p. 553.)

Animals involved in the same flash do not all suffer equally, I have heard of many instances where animals together have been struck, some being killed or injured while others near were unhurt.

It has also been observed in cases of animals in a line, that the outside ones generally suffer most seriously. I heard of a case where a stable containing several horses in a row was struck, the horse at one end was killed, and the one at the other end was thrown down and lost consciousness, but recovered in a short time and appeared all right, the remainder apparently being in no way affected.

Post-mortem appearances. The suddeness of death sometimes is such that there may be no appearances and no physical changes in the carcase, to indicate the mode of death.

Generally speaking there are externally singeing or blackening of hair, marks of contusion and laceration about the spot where the electric current has entered or passed out. It has been observed in some instances to mark out injuries, from scorchings of hair to deep burns, in the shape of branches of trees. This is perhaps the result of the electric fluid following the course of the bloodvessels causing extravasations. Sometimes in men a severe wound has existed, on other occasions there has been no wound but an extensive ecchymosis. (*Taylor's Jurisprudence.*) Venous system generally engorged, and blood dark with a tendency to rapid decomposition. Ecchymoses are both internal and external, in some instances marking the entrances and course of the electric current.

It was formerly supposed that the blood was never found coagulated after death by lightning and that the carcase did not become rigid. Experience has shown however that these statements are not in accordance with observed facts,

In many cases in men metallic sabstances have presented traces of fusion, and articles of steel have been observed to acquire a strong magnetic polarity. West met with the case of a boy, aged 18, instantly struck dead by lightning where a knife in the pocket had a strong magnetic polarity, the deceased wore at the time of the accident a pair of strong leather boots, these were torn to shreds probably owing to the presence of iron nails in the soles.

In horses that are shod and in cases where animals have had metallic substances about them, results similar to the above in many instances would occur, but I have not heard of such being observed.

Bodies have been known to retain the position they were in before death. The Rev. Mr. Butler relates a case in which a man was struck by lighting whilst in the act of feeding a dog with one hand and caressing it with the other. Both the man and the dog were petrified as it were in this position. The hand of the man was still holding the piece of bread.

In cases where after a very careful examination no lesions are found to account for death and where death by lightning is suspected, inquiries should be made as to whether a thunderstorm took place about the time the accident occurred. The ground and surrounding objects should be examined, and in the majority of instances the practitioner will be able to satisfy himself as to the cause of death.

Legal Relations. Although I am not aware of any litigation with reference to animals, cases have occurred where Insurance Companies have disputed claims made on account of death by lightning. I have heard of disputes arising out of the fact that horses were totally disabled by a stroke of lightning, which in my opinion is equivalent to death, the Insurance Company refusing to admit the claim until death had occurred.

Preventive Measures. These are practised with the greatest success all over the world in the shape of lightning conductors.

A "lightning conductor" protects a space nearly equal to its own height from its base outwards, and therefore a considerable area is protected. In a large breeding establishment near Leeds, the following system was adopted in the park.

Each large tree had a conductor some distance above its highest point, which was carried into a tank of water at the base, the tree being railed round; and during 23 years that this system was in vogue a large and valuable herd was out in the park, although in an exposed position not a single animal was struck by lightning.

In conclusion, gentlemen, I thank you for the kind attention you have given to my remarks; I have endeavoured to place before you a few facts and to describe what post-mortem lesions are most likely to be found after death by lightning. Whilst preparing this paper I have come across many rather romantic tales, the results of a flash of lightning, and although some of them may be true, the date and unlikely circumstances of the majority requires more modern confirmation. I hope all of you, especially those who are practising in country districts, will give your opinions and experiences on this subject.

Discussion.

The Chairman initiated a discussion upon the subject, regarding which, he said, they had little literature, and their practical knowledge was meagre. He thought that in justice to their own consciences they should know what they were doing when they were called upon to examine the carcase of an animal and give a certificate as to whether it had died from the effects of lightning. He believed that when stockowners were insured against fire the insurance included compensation for deaths of stock by lightning, and many people were, as they were aware, eager to make the best of their opportunities and receive compensation when they could. He narrated some of his own experiences, and said that when they were consulted in regard to lightning cases they should look for signs on the grass and trees that there had been lightning.

Mr. Mason agreed with the Chairman as to the absence of literature on the subject, and, referring to post-mortem examination, said he had noticed that when an animal had been struck by lightning the blood did not coagulate. The blood in the heart was in a perfectly liquid state.

Mr. Pickering remarked that decomposition took place very quickly in an animal which had been struck by lightning. Was the carcase of an animal so struck fit for food? One authority said that if the animal was bled soon after it was struck it was fit for food. He thought that many of the animals that were struck were affected by what was called the counter-shock. The conditions of the carcase were similar to those noticeable after strangulation.

Mr. Bowman considered the post-mortem examinations most unsatisfactory in their results. He remembered a case where a man saw the lightning strike a mare and kill her in a moment, but when he (Mr. Bowman) came to make the post-mortem examination he could neither

find the hair singed nor any discolouration under the skin. Often, however, they did find the hair singed and the skin discoloured.

Mr. FRANK SOMERS observed that during the past two years he had seen many animals which had been killed by lightning. His experience was that laceration and deep injuries rarely occurred, but that singeing of the hair and redness under the skin were generally apparent. As Mr. Bowman had observed, post-mortem examinations were not wholly satisfactory, but often they were able to ascertain some indications that would warrant them in giving an opinion as to the whether the animal had been killed by lightning or not.

Mr. CLARKSON said his experience was that, as a rule, they saw very little singeing. Most of the animals met their death or received their injuries by the counter-shock or recoil, and in those cases there were no external marks. As to the question of insurance, he thought it was not only a great hardship upon the owner, but distinctly cruelty to the animal that the insurance companies did not pay till the horse or cow died. In all humanity the insurance companies ought to settle the claim sooner than they did.

In replying to the discussion, Mr. WHARHAM said he thought it was settled that the blood did coagulate after death by lightning. As a rule, the electric fluid took the course of the blood vessels. Rapid decomposition was undoubtedly a fact, and in a great measure was hastened by the heat which obtained during the time of thunderstorms. Counter shock, as pointed out by Mr. Pickering and Mr. Clarkson, was a frequent cause of death. With reference to another point raised by Mr. Clarkson, he thought that the insurance companies should consider animals which were totally disabled as dead, and not wait for them to die of their injuries. If an animal was totally disabled, it was equivalent to being dead.

On the motion of Mr. Mason, seconded by Mr. Clarkson, and supported by the Secretary, a cordial vote of thanks was accorded to Mr. Wharam for his paper, and the proceedings terminated.

FRANK SOMERS, *Hon. Sec.*

EXTRACTS AND NOTES.

THE REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS.

CONSTITUTION OF THE COMMISSION.

The report of the Royal Commission, appointed in July 1890, to inquire into the Effect of Food derived from Tuberculous Animals on Human Health, has been presented to Parliament after a period which has seemed to some people, unacquainted with the character of experimental inquiries of this nature, an unreasonable delay.

The Commission as originally appointed consisted of Lord Basing (chairman), Sir George Buchanan, Prof. G. T. Brown, C.B., Dr. Frank Payne, and Professor Burdon Sanderson, with Mr. Leopold Hudson, F.R.C.S., as Secretary. After the death of Lord Basing, a new commission was issued with Sir George Buchanan as Chairman, but the other members of the Commission were the same.

MODE OF INQUIRY.

The Commissioners were directed to "inquire and report what is the effect, if any, of food derived from tuberculous animals on human health; and, if prejudicial, what are the circumstances and conditions with regard to the tuberculosis in the animal which produce that effect upon man." The Commissioners in the first place gathered information as to knowledge already in existence, and to this end considered memoranda (1) by the Secretary, Mr. Leopold Hudson, on the published literature bearing on the subject, stating the nature of the investigations which had up to that time been carried out, and the results arrived at; (2) by the then Principal Medical Officer to the Local Government Board (Sir George Buchanan) as to the state of the law in respect of animals, meat, and milk unfit for the food of man; and (3) by Professor Brown on *(a)* the considerations which led to the appointment of the Departmental Committee on tuberculosis and pleuro-pneumonia; and *(b)* that part of the report of this Committee which related to tuberculosis, and advocated the slaughter of obviously diseased animals and payment of compensation; and *(c)* the provisions contained in an order drafted in accordance with this recommendation, but not passed. The Commissioners then, in the last quarter of 1890, took evidence, the witnesses being persons conversant with the pathology of tuberculosis, and with the diseases of children, or representatives of the butchers or cattle dealers who stated the grievances of these traders.

EXPERIMENTAL INQUIRIES.

The Commissioners resolved to arrange that certain experimental inquiries should be made under its direction into points as to which there appeared to be no published evidence available. These inquiries were three in number:

1. By Professor John McFadyean, of the Royal Veterinary College, London, into the means of recognising tuberculosis in animals during life.
2. By Dr. Sydney Martin into the influence upon the lower animals of food of tuberculous origin.
3. By Dr. Sims Woodhead as to the effects of cooking processes upon food from tuberculous animals.

THE IDENTITY OF TUBERCULOSIS.

It will be convenient to give here a statement made by the Commissioners later in the report, since it clears away a certain element of confusion. Dealing with the appearances produced by tuberculosis in man and animal they state "explicitly that we regard the disease as being the same disease in man and in the food animals, no matter though there are differences in the one and the other in their manifestations of the disease; and that we consider the bacilli of tubercle to form an integral part of the disease in each, and, whatever be its origin, to be transmissible from man to animals, and from animals to animals. Of such transmissions there exists a quantity of evidence, altogether conclusive, derived from experiment. It is with the transmission of the disease to man by the ingestion of animal food that the present Commission is concerned.

"The effects upon human health here spoken of as 'tuberculous disease' are known to be different in some respects from the manifestations of tubercle in lower animals; and these differ again in one and another lower animal. There are also abundant differences in the manifestations of tubercle in the human body; differences no less than those exhibited by tuberculous phthisis, tabes mesenterica, tuberculous meningitis, and scrofula. We recognise in these different manifestations a varying amount of tuberculous matter or activity of tubercle bacilli; the influence of the lymphatic system, the invasion of different organs, and so forth, together with a variety in the avenue by which tuberculous matter has been received into the human body, whether by the alimentary or by the respiratory system, or by other ways.

"Again, as we find no distinction in nature between the various manifestations of tubercle in the human subject, so also we find no distinction in nature between the

tuberculous diseases of man that have had their origin in tuberculous food and the tuberculous diseases of man that have been otherwise acquired. We know, indeed, of some of the tuberculous diseases above mentioned, especially those of the intestinal tract, being almost peculiar to children; and probably the proportion of tuberculous persons contracting their disease through food is larger among children than among their seniors. We were not surprised to find that there is, at present, little information of this sort to be had; it is hardly to be expected until search has been made for a relation between tuberculous disease in man and tuberculous food taken by man. But in the future we look to health officers and hospital physicians for observations of importance on these points; though we are fully sensible of the difficulties that must attend any attempt to learn the origin of complaints of which the course is so slow as that of most tuberculous diseases."

Effects of Feeding on Meat and Milk from Tuberculous Animals.

Experiments in this direction were made by Dr. Sidney Martin and also by Dr. Sims Woodhead:

1. "Meat" (using the term in the sense in which it is commonly used by butchers) from tuberculous animals, but free from obvious masses of tubercle, and milk from tuberculous cows, was fed uncooked to pigs, guinea-pigs, and rabbits, along with their usual food. Of the pigs, 5 out of 14 (36 per cent.); of the guinea-pigs, 24 out of 145 (16 per cent.); of the rabbits, 2 out of 13 (15 per cent.) became tuberculous. A number of control animals were kept under the same conditions (the pigs were from the same litter) but were not given tuberculous material in the food. Of these control animals (5 pigs, 203 guinea-pigs, and 8 rabbits) none became tuberculous.

2. Experiments were made also by feeding animals with tuberculous matter, that is to say, not merely meat derived from tuberculous animals, but obvious tuberculous matter recognised as such. In Dr. Martin's experiments the material was taken in some cases from a bovine animal, but in other cases it was derived from a human source, and each animal received only a single dose. One pig, 8 guinea-pigs, and 10 calves received each such a dose; the pig, 6 guinea-pigs, and 8 calves became tuberculous. In some experiments by Dr. Sims Woodhead it was found that tuberculous disease followed feeding on (uncooked) tuberculous matter, in all of the pigs (7), in all the cats (5), and in 50 guinea-pigs out of 76.

The increased incidence of the disease on the animals under the second set of conditions (2) indicate, it is pointed out, the element in the material used for feeding, which is the source of danger.

Circumstances determining Danger to Man from Meat from Tuberculous Animals.

Since, then, a person who takes tuberculous matter into the body as food incurs risk of tuberculous disease, and since it is known that this matter may be found in certain parts of animals affected with the disease, it became desirable to ascertain precisely what parts of an animal affected with tuberculosis, were liable to contain this tuberculous matter. This matter is not present, or present to an equal degree, in all the organs. It "is found principally in the organs of the animals; as a rule, most abundantly in the lungs, lymphatic glands, serous membranes, but often in the liver, spleen, kidneys, intestines, and other structures. These organs are usually removed by the butcher in 'dressing' the carcase, though some of them may, intentionally or not, be left. To a practised eye it is hardly possible that tuberculous matter in these organs can escape detection, and the importance of its presence there will soon be apparent. For in the tissues which go to form the butcher's 'joint' the material of tubercle is not often found, even where the organs exhibit very advanced or generalised tuberculosis; indeed, in muscle and muscle juice, it is very seldom that tubercle bacilli are to be met with; perhaps they are somewhat more often to be discovered in bone, or in some small lymphatic gland embedded in intermuscular fat. Yet there is always a difficulty in making sure of the absence of tuberculous matter from any part of a carcase that shows evidence of tubercle elsewhere."

On this point Dr. Sidney Martin made a series of investigations, by microscopical examination of the "meat," by feeding with the "meat," and by inoculation with the "meat." The meat was derived from 21 cows known to be tuberculous; 8 had "mild tuberculosis," 8 "moderate tuberculosis," and 5 "generalised tuberculosis." Microscopical evidence of tuberculosis was obtained only in 2 cows, both belonging to the group with "moderate tuberculosis." Of the 8 cows with "mild tuberculosis" the meat of 1 gave positive results in one animal from inoculation; none by feeding. Of the 8 cows with "moderate tuberculosis," the meat of 3 gave positive results in 4 animals from inoculation, none by feeding. Of the 5 cows with "generalised tuberculosis," 4 gave positive results, either by inoculation or by feeding, 1 only out of the 4 appearing to answer to both tests.

These experiments bring us to one of the most important practical points in the report. It should be stated that the meat of the 2 cows in which the existence of tubercle was demonstrated microscopically did not produce tuberculosis in the animals to which it was fed, though inoculation of the meat from 1 animal did. This failure to produce tuberculosis by feeding with the flesh of the 2 animals and by inoculation with the flesh of one of them might be attributed to the small amount of tubercle found in the meat of these 2 cows—the only 2, be it remembered, in which it was found at all—but this explanation would not serve to account for the fact that in the whole series the positive results were in direct relation to the severity of the disease. Dr. Martin, according to the report, argued that "he was dealing with a quantity of tuberculous matter supplied to him—not, he reasoned, from the muscular tissues that he had proposed to investigate, but somehow from the general carcase of the cow, and abundant in the matters he was inoculating, just as it happened to be abundant in the general carcase; and insufficient in amount until he came to the maximum amount in the general carcase, to react to the test of feeding, though—with smaller amounts in the carcase—he had sometimes got an answer to the more delicate test of inoculation."

The experiments dealt with meat as it would be sold by the butcher—meat that had been "trimmed" by the removal of the stuff which, mainly for the sake of tidiness, the butcher cuts away, and which includes *inter alia* bits of gland and serous membrane. The probability that the meat might become contaminated from the actual tuberculous lesions present in other parts of the carcase, and conveyed from thence to the proper meat substance by the hands, knives, and cloths of the butcher during the processes of flaying and dressing, had to be considered. It is pointed out that this is a danger which would increase along with increased abundance of the material of tubercle in the carcase, and that much that was inexplicable in the results of feeding and inoculation would become explicable on this hypothesis.

"The greater the amount of tubercle there is in the cow the more likely is the sticky caseous matter to get smeared over the carcase..... If we imagine that the meat gets contaminated accidentally in this way, it is easy to explain the irregularity of the results." Dr. Martin argues: "(1) How, for example, in cases of mild tuberculosis of the cow the danger of contamination is not great, and therefore the meat does not get smeared to any extent during removal, so that no positive results

were obtained by feeding, and only one positive result by inoculation, and this a case of local tuberculosis, showing a small dose. (2) How in cases of moderate tuberculosis, where chiefly the lungs and lymphatic glands in the thorax are affected, and so may be removed entire without incision of a tuberculous lesion, the meat, as in cases of mild tuberculosis, would not become much contaminated, and thus did not produce tuberculosis by feeding, and how in these cases the knife is more likely accidentally to incise a tuberculous lesion than in cases of mild tuberculosis, and that therefore the number of cases of positive inoculation is greater..... With generalised tuberculosis of the cow this danger would increase, since so many parts of the body are affected with the disease, so that in such cases we meet for the first time with positive results from feeding but not uniformly positive ..... Taking all the results together—the method of removal of the meat, the results of inoculation and of feeding—one is driven to the conclusion that when meat is infective, it commonly acquires its properties by being accidentally contaminated with tuberculous material during its removal from the carcase. This conclusion, it is evident, is one of great practical importance, bearing directly on the question of the condemnation of the meat of tuberculous cattle for human consumption. And it is evident also that the infective properties of meat might vary with different series of experiments. The result depends on the care taken in guarding against contamination more than on anything else. The conclusion arrived at in part explains the extremely divergent results obtained by previous observers."

Conclusions as to Danger of the Use of Meat from Tuberculous Cattle.

Upon this the Commissioners observe that the extrinsic danger by contamination so affected to harmless meat "might just as well be encountered by meat from another animal (whether pig, sheep, or calf, ox, or cow) that was perfectly free from tubercle, but only had happened to be next the animal brought to the same slaughterer." The Commissioners are prepared to believe that "if sufficient discrimination and care were exercised in taking meat from tuberculous cattle, a great deal of meat from them might without danger be consumed by the community. The practice of public abattoirs on the Continent appears to be founded on the same belief."

Dr. Martin makes certain suggestions with regard to this matter, which the Commissioners say are "based on well ascertained pathological facts." To reduce to a minimum the danger to human consumers of meat, he advocates that "slaughtering and dressing should be done under skilled supervision, with the object of securing the removal and destruction of every part of a carcase that contained any tubercle whatever, and also the destruction of the whole carcase in cases where the animal was found to have advanced or generalised tuberculosis." He "sees no objection to the sale of meat substance from carcases which have shown only localised tuberculosis, and from which every particle of tubercle has been skilfully removed; provided always, that in every subsequent process of preparing the meat for sale, due care be taken to guard the saleable portions from contamination by tuberculous matter." With regard to the 21 cows with the meat from which he experimented, he expresses the opinion that if the precautions indicated had been in force the meat of 9 would have been condemned, while the meat of the other 12 might have been sold. The Commissioners point out that "little evidence about the more serious degrees of tuberculosis in the animal would be discoverable in carcasses from which the organs had been removed; and that this is habitually the case with so-called "dead meat," whether English or foreign. Still there are indications in such a carcase, to the eye of an experienced inspector, of the more dangerous forms of tuberculosis having existed in the animal." They have "no doubt that the supervision which he (Dr. Martin) recommends would tend in an important measure to the security of the public. But we are well aware that the difficulties of such supervision are so great that many years must elapse before any measure of an effectual kind can be carried into practice."

Circumstances Determining Danger to Man from the Milk of Tuberculous Cows.

On this important subject the Commissioners arrive at the following conclusion: "According to our experience," they write, "the condition required for ensuring to the milk of tuberculous cows the ability to produce tuberculosis in the consumers of their milk is tuberculous disease of the cow affecting the udder. It should be noted that this affection of the udder is not peculiar to tuberculosis in an advanced stage, but may be found also in mild cases."

Dr. Martin's experiments on this point were briefly as follows:

(*a*) Eight tuberculous cows with healthy udders; no tubercle bacilli found in the milk of any of them: 41 test animals fed and 28 inoculated with the milk remained free from the disease.

(*b*) Two tuberculous cows with udder disease found *post-mortem* not to be tuberculous; not tubercle bacilli in the milk; 3 test animals fed and 14 inoculated with the milk remained free from tuberculosis.

(*c*) Five tuberculous cows with udder disease found *post-mortem* to be of tuberculous nature; tubercle bacilli found in the milk of three; 15 test animals fed with the milk and 13 inoculated with the milk of these 3 cows all acquired tuberculous disease. Of the other 2 cows, the milk from 1 produced tuberculosis in 4 out of 10 test animals fed on it, and when inoculated into 6 other animals produced tuberculosis in all. The milk of the fifth cow did not produce tuberculosis in 2 animals to which it was given as food, but did produce tuberculosis in 2 other animals into which it was inoculated.

(*d*) In two cows with udder disease in which the veterinary diagnosis of tuberculosis was made, but which were found *post-mortem* not to have tuberculous disease; no tubercle bacilli were found in the milk, and no resulting tuberculosis was observed in 17 animals inoculated with the milk.

Both Dr. Martin and Dr. Woodhead comment on the extremely virulent nature of the milk derived from cows with tuberculous udders. Further, butter, skimmed milk, and buttermilk obtained from the milk of a cow having tuberculous udder (by the usual processes, but with complete precautions against accidental contamination of articles used in the manufacture) all contained tuberculous matter actively injurious to test animals. Dr. Woodhead draws attention to the rapidity with which this udder disease may spread, and with which, in consequence, milk can obtain its harmful quality. "The very absence," he adds, "of any definite sign in the earlier stage is one of the greatest dangers of this condition." Both Dr. Martin and Dr. Woodhead insist that no tuberculous animal of any kind should be allowed to remain in a dairy.

Conclusions as to the Prevention of the Dissemination of Tuberculosis through Milk.

"The withdrawal from dairies of every cow that had any disease whatever of her udder," the Commissioners conclude, "would form some approach to security against the serious danger incurred by man from the use of tuberculous milk, but it would not be an adequate security. The presence in a dairy of a tuberculous cow ..... is a decided source of danger to the public, especially having regard to what we have learnt respecting the rapid development of tuberculosis in the udder and the degree of danger to milk consumers incurred by the invasion of the udder in tuberculous cows."

Recommendations as to Milk.

The recommendation of the Royal Commission as to the prevention of the danger pointed out above is contained in the following paragraph:

"It follows from the observations here recorded that it is of supreme importance to the consumers of milk that the existence of any tuberculosis disease of the udder should be ascertained without delay. Now there is no difficulty whatever about recognising the presence of some abnormal condition in a cow's udder, and the presence of such condition—whatever it be—demands that the judgement of a responsible expert should forthwith be obtained about its nature; unless, indeed, the owner prefers to slaughter the cow without delay. If the expert finds tubercle bacilli in the milk, the cow has dangerous tuberculosis of the udder. If he does not find them, he may apply the further test of inoculating some susceptible animals with the milk, and thereby learn the nature of the udder disease. By this test he will very rarely be misled. Obviously the cow must be in seclusion, and every particle of her milk must be treated as highly dangerous during any delay that can be permitted for diagnostic purposes, and until the disease has been proved not to be tuberculosis."

Influence of Cooking (a) upon Tuberculous Meat.

The experiments upon this head were made by Dr Woodhead. He concluded that ordinary cooking sufficed to destroy the harmful quality of tuberculous matter so far as the required heat penetrated into the substance of the meat. To subject every particle to the boiling temperature for a single instant was sufficient, but experiments made to ascertain the temperature to which joints are actually raised during cooking proved that the boiling point was not reached, and that under certain circumstances there might be a very real danger of tuberculous matter escaping altogether any diminution, or at least any adequate destruction, of its virulence. The experiments were made with rolls of meat, as no joints known to contain tuberculosis material were available. Tuberculous matter was either injected into the substance of the meat or smeared on to slices, which were then rolled tightly up. His results are thus reported in his own words:

In the boiling and roasting experiments, as ordinarily carried out in the kitchen, the temperature, however high it may be near the surface, seldom reaches 60° C. in the centre of a joint, except in the case of joints under 6lbs. in weight. Ordinary cooking is quite sufficient to destroy any smeared material that remains on the outer surface of the meat, *but it cannot be relied upon in the slightest degree to render innocuous the same smeared material when in the centre of a roll.*

The italics are Dr. Woodhead's. In another place he says:

Ordinary cooking, such as boiling, and more especially roasting, though quite sufficient to sterilise the surface and even the substance for a short distance from the surface of a joint, cannot be relied upon to sterilise tuberculous material included in the centre of rolls of meat, especially when these are more than 3 lbs. or 4 lbs. weight. The least reliable method of cooking for this purpose is roasting before the fire, next comes roasting in an oven, and then boiling.

The Commissioners do not doubt the accuracy of these conclusions, and leave them to teach their own lesson, merely pointing out their importance in connection with the use of raw meat juice as food for delicate infants.

Influence of Cooking (b) upon Tuberculous Milk.

The central idea of Dr. Woodhead's report on the effect of cooking on tuberculous milk is the advocacy of the boiling of all cow'smilk which can by any chance contain tuberculous matter. "The most deadly tuberculous material," he writes, "can be rendered absolutely innocuous, so far as any spreading infective disease is concerned, by the action of a temperature at which water boils. We have evidence," he adds, "that a lower temperature than this is sufficient to bring about the same results when allowed to act for a longer time, but for the present it is sufficient to state that boiling, for an instant even, renders the tubercle bacillus absolutely innocuous." Dr Woodhead states that "sterilisation" of milk in a water bath may be effectual in destroying its infectious qualities if the temperature is brought to 80 to 92 C. (176 to 198 F.), but the Commissioners do not appear to be altogether convinced of the practical value of this method, and prefer to recommend as at once more easy of application and more reliable "the simple expedient of putting every suspected milk over the fire, and taking it off when it boils."

Final Conclusions.

The following are the final conclusions of the Commissioners: "Ordinary processes of cooking applied to meat which has got contaminated on its surface are probably sufficient to destroy the harmful quality. They would not avail to render wholesome any piece of meat that contained tuberculous matter in its deeper parts. In regard to milk we are aware of the preference by English people for drinking cows' milk raw, a practice attended by danger, on account of possible contamination by pathogenic organisms. The boiling of milk even for a moment would probably be sufficient to remove the very dangerous quality of tuberculous milk.

Diagnosis of Tuberculosis in Cattle.

The report does not speak in very definite terms under this head. Professor McFadyean reported to the Commissioners that his experiments and investigation had brought him to the conclusion that extensive tuberculous disease might exist in animals which appeared after all the tests he could apply to be in perfect health. The injection of tuberculin as a test had frequently led him to erroneous conclusions—wrong indications about the presence or absence of tuberculosis in 24 out of 75 animals. Professor McFadyean, however, in spite of this, feels justified in summing up his report as follows: "I have no hesitation in saying that, taking full account of its imperfections, tuberculin is the most valuable means of diagnosis in tuberculosis that we possess." The Commissioners add that they "understand that, since the time of Professor McFadyean's experiments, the method of using tuberculin as a test has been much improved, and that it is now regarded as affording more trustworthy indications for diagnosis.

Professor Brown's Note.

In a "Further Report" appended to the report, signed by all the Commissioners, Professor Brown expresses his concurrence, but adds certain observations on the inquiries carried out by the Veterinary Department, and discusses briefly the grievances of farmers and meat salesmen. As to the latter, he observes that their chief grief is the seizure and destruction of the carcases of animals which immediately before slaughter appeared to be in perfect health and good condition; they advocate strict inspection before slaughter and compensation. Such a system Professor Brown considers open to "very obvious abuses," but adds that "With the present improved means of diagnosis one benefit would doubtless be gained. Tuberculous animals might be removed to slaughter-houses reserved for the purpose, in which the proper means might be provided for destroying or sterilising meat as might be necessary, without any risk of contaminating the carcases of healthy animals. There would be difficulties to be overcome in carrying the proposed method into effect, but it need not be

assumed that the scheme is impracticable." The question of compensation was outside the terms of reference to the Commission, but Professor Brown makes the remark that "the hardship of which meat traders complain would be materially lessened under a properly regulated system of meat inspection by persons competent to judge as to the extent and character of tuberculous deposits, and to devise and carry into effect the necessary means for preventing the accidental contamination of meat in the way which has been described" by Dr. Martin.

THE BOARD OF AGRICULTURE.

Another View.

The following appeared in the Agriculture column of *The Standard*:—

"Mr. Herbert Gardner will find some difficulty in framing an effective reply to the complaint of the Royal College of Veterinary Surgeons printed in *The Standard* of Thursday. Attention was directed to the subjected in this column on the 22nd of January, and a question was subsequently asked upon it in the House of Commons, to which Mr. Gardner gave a pleasant but ineffective reply. He disclaimed any intention of degrading the veterinary officers of his Department; but he could not deny that a lay officer had been placed over them, or that the Veterinary Department, as such, had been abolished, and is now merely a branch of the Animals Department. There is an uneasy feeling among agriculturists tc the effect that Mr. Gardner has been actuated by the desire of weakening the influence of his veterinary officers, which has been powerful enough in the past to prove an effectual safeguard against any relaxation of sanitary restrictions in relation to the importation of foreign animals, greatly to the advantage of the country. This suspicion may be a mistaken one, and we hope it is; but its existence is not altogether surprising under the circumstances.

DAMAGES FOR BITE OF A DOG.

(Before Mr. Justice Grantham and a Common Jury.)

Lewis v. Kavanagh.

This was an action to recover damages for personal injuries sustained through a bite from a dog, alleged to belong to the defendant.

Mr. Morton Smith was for the plaintiff; and Mr. P. Rose-Innes was for the defendant.

Mr. Morton Smith having shortly opened the case to the jury, the plaintiff was called and said he was a painter's labourer, residing at Hounslow. On November 13, 1894, he was employed loading a truck at 12, The Terrace, Bath Road, Hounslow—a house belonging to a Mr. Chapman, his employer. Some dogs came into the garden, and he was told by Mr. Chapman to drive them out. He clapped his hands. Two of the dogs went out of the garden. The third, a St. Bernard, came at him and bit him in the left hand. He went to the defendant's house and complained. He then went to Dr. Ball's and had his hand dressed. His hand was healed in March of the following year. At the time he was bitten he was earning £1 a week. He suffered very much pain and still did so.

Cross-examined.—The place where the dogs came into was a piece of waste land. He did not put up his hands suddenly, nor did he rush at the dog.

Dr. Ball, M.B., M.R.C.S., said he saw plaintiff on November 13. He was suffering from a very severe dog bite. There was one wound on the ball of the thumb and four others elsewhere on his hand.

Harriet Davenport said she was a domestic servant. On June 8, 1894, she was walking along the Bath Road She saw defendant's dog lying on the footpath. It sprang up and bit her. The same day she complained to the defendant, and also on a subsequent occasion.

Cross-examined.—The defendant never told her the dog was not his.

Police Sergeant Arnold said he knew the dog. He had spoken to the defendant about its ferocity. Complaints had been made to him about it. This closed the plaintiff's case.

Surgeon-Major Kavanagh was called and said he was the defendant. In 1892 one of his brother officers left this St. Bernard dog in his care. He gave it to a friend of his—a Mrs. Patterson—in the beginning of 1894. On November 13 the plaintiff came to see him and showed him his hand. He thought the bite a very trivial one and gave the plaintiff a shilling. The plaintiff told him he had waved his arms at the dog. Since he gave the dog to Mrs. Patterson he had had no control over it.

Mrs. Patterson said the defendant gave her the dog in the early part of 1894.

Colonel Patterson, the husband of the last witness, gave corroborative evidence.

Mr. Rose-Innes, on behalf of the defendant, submitted that the plaintiff had provoked the dog and enraged it; and, secondly, that the dog did not belong to the defendant, and therefore he was not liable.

The learned Judge, having summed up the case,

The jury returned a verdict for the plaintiff, with £50 damages.

His Lordship gave judgment accordingly.

Magisterial Ignorance.

At the Castlerea Petty Sessions, before Captain M'Ternan, R.M. (chairman), Mr. G. Sweeny, and Mr. Kelly, J.P.'s, a case was heard at the suit of the Queen v. Jas. Gunning, Pat Govern, and John Morris, for that they did on the 17th of March expose pigs at the fair of Castlerea for sale contrary to the restrictions of the Diseases of Animals Act, 1894, Article 6, of the Markets and Fairs Swine Fever (Ireland) Order, 1895, which applies to the Castlerea Union. The defendants pleaded ignorance of the law. Captain M'Ternan, R.M., in giving the decision of the Bench stated that as long as he remembered swine fever was in the country, and would continue despite all their efforts, and that the people were put to an enormous amount of expense by paying those gentlemen going around trying to stamp out a disease which they had no power of doing. He would fine the defendants 6d. each and costs.—*Mayo Examiner.*

PARLIAMENTARY.

Disease in Imported Sheep.

In the House of Commons on Tuesday, 30th April, in reply to Sir H. Maxwell,

Mr. Gardner said,—I have read the letter to which the hon. baronet refers, and in which Professor McCall states that the disease to which the Renfrewshire Agricultural Society has recently directed attention has been known to him for 30 years. After examination of the specimens sent to us, the veterinary officers of the Board have come to the conclusion that the disease is one of a

parasitic nature, well known to American pathologists and fully described by them under the title of the nodular disease of the intestines. I propose to address a further communication to the society on the subject, and it will continue to engage my attention, but it is not one which need cause, I think, much anxiety to stock-owners in this country. Large numbers of sheep have been imported from the United States, but, so far as my veterinary officers are aware, the particular parasite in question has never been detected in home animals, although the disease has been well known to exist in the South-Eastern States for many years past.

AN UNDEFINED DISEASE IN SHEEP.

SIR,—I have read Professor M'Call's outburst on my report to the committee of the Renfrewshire Agricultural Society regarding American sheep, and I see he is trying his old game of leaving the disease question, the subject matter of my report, and singling out the writer for slaughter. He indulges in assertion without the least proof; he forgets what I said before—that an assertion without proof goes for nothing; and he leaves his opponent just as much liberty in this direction as he takes to himself. All this comes to nothing. It is childish. If I were to assert that Professor McCall knew nothing of this disease, by this own procedure I do not require to prove it. It is just the schoolboy style—"You did; no, I did not." As I told the professor before, he should pray often—"Lord keep me from self-conceit." It is a law in fair debate that if proof cannot be adduced, mere assertion goes for nothing. In a letter to the press he can take a wide berth in this sort of thing, but the habit is chronic with him, and we can overlook it. The only argument in his letter is when he gives his reason for differing from me as to the meaning of the word "hereditary." Now, I will try to meet this fairly. When a dispute arises either in a court of law or in our veterinary society about the meaning of a word, we go to one of the best standard dictionaries and consult the author's opinion. We agree that it is to be conclusive. Professor M'Call will admit that Hooper's "Medical Dictionary" is a standard work. It defines hereditary disease as a disease that is propagated from parent to offspring, and this is the meaning I have adopted. The professor must, therefore, reckon with Hooper about this. I take his meaning—not a meaning which may be specialised in the professor's own college. As to abusing inspectors, the remarks of the learned gentlemen are beside the point. I made no reference to inspection in this country, but to the inspection of dead meat in America.

Having referred to the various points in the professor's letter, one wonders what object he had in writing at this stage. He has given no information but this—that he strongly feels for the American if we succeed in stopping this disease coming to this country. Not a word of sympathy has he expressed for those unprotected sheep-owners who have purchased some of these diseased animals, and say they are a miserable lot. If he has known this disease for thirty years he must have known it practically as well as theretically, and heard of complaints regarding it. If not, some of his acquaintances are quite ready to give him some information, and I can assure you, Mr. Editor, it is anything but pleasant reading. Let the professor, then, give us the name of this disease, for to call it a parasitic disease only refers us to the class. If he has known it for thirty years surely it has not been nameless all that time. He might inform us if he has heard of many losses from it; how the animals are affected at first; how many go on to wasters; if the lambs from sheep with this disease are generally strong and healthy: or do one half of them die? Any further information will be welcome, and a full statement of facts would be useful. Science is a collection of facts, not theories; and if the professor gives us some of the former material, there are one or two intelligent sheep-owners ready to let him know their mind. The discussion will then be more interesting, for it will have passed from the region of theory into that of ascertained fact.—Yours, &c.,

ALEXANDER POTTIE, Veterinary Surgeon.

Paisley, 26th April, 1895.

The Scottish Farmer.

ARMY VETERINARY DEPARTMENT.

Extract from Gazettes:—

WAR OFFICE, PALL MALL, *April* 30.

Vet.-Capt. A. Bostock to be Vet.-Major.

Vet.-Captain F. Smith is announced to read a paper before the Royal Institution of Great Britain, Albamerle Street, W., on Friday evening, May 3rd, on the subject of "The Structure and Functions of the Horse's Foot."

CORRESPONDENCE.

CONTAGIOUS ABORTION.

SIR,

I have been lately in attendance of a stud where contagious abortion has occurred and am unable to prevent it. Perhaps some members of the profession could throw some light on the subject, by doing so he would greatly oblige

VERITAS.

UNSTAMPED EMBROCATION.

SIR,—Will you allow me space in your next issue to explain the true facts of the case headed as above? Your report gives the impression that I was trying to defraud the Inland Revenue by not having the "Liverpool Embrocation for Horses and Cattle" stamped. The information laid against me by the Inland Revenue is for having sold a bottle of "Liverpool's Embrocation for Horses and Cattle," so labelled on the bottle and outside wrapper, enclosing a handbill on which is advertised Liverpool's Embrocation, which, although a veterinary preparation, inadvertently appears in a handbill announcing a number of preparations for human use.—Yours, &c.

JOHN KIRBY PILKINGTON, M.R.C.V.S.

COMMUNICATIONS, BOOKS AND PAPERS RECEIVED.—Messrs. J. R. Pilkington, D. C. Campbell, "Veritas."

The Veterinary Magazine (Philadelphia) March, *The Clare Journal*, *The Chester Courant*, *The Evening Dispatch* (Edin.) *The Liverpool Mercury.*

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.

Communications for the Editor to be addressed 20 Fulham Road, S.W.

A reply from the Board of Agriculture.

4, WHITEHALL PLACE,
LONDON, S.W.,
April 19th, 1895.

No. 1058/1895.

SIR,

I am directed by the Board of Agriculture to inform you that they have had under their consideration your letter of the 6th inst., together with the copy Report enclosed therewith.

With regard to the salaries and duties assigned to individual officers of the Department, I am to say that questions of the kind necessarily involve personal considerations of great delicacy and difficulty, and the Board feel that it would not be for the public advantage that they should do more than refer in a very general manner to the views expressed in the Report.

The Board desire me to observe, however, that it had for some time past been foreseen that, on the retirement of Professor Brown from permanent duty at this office, a re-arrangement of business must take place. On the one hand recent legislation has largely increased the executive work of the Board, in regard to which it has always been the policy of the Board to look for assistance to local veterinary practitioners as much as possible, and to avoid any unnecessary concentration of professional work in official hands. On the other hand, the great advances made in veterinary science and in methods of pathological research have led the Board to desire that their professional officers should be placed in the best position to take full advantage of those advances and be enabled themselves to carry on those original investigations which have been the basis and foundation of the operations undertaken against disease in the past, but which, so far as the professional officers of the Board are concerned, have in recent years been much interrupted by the pressure of duties of a non-professional character.

It is not probable that the special qualities necessary for the direction of the work now to be done under these two heads will often be found combined in any one individual, and, from the experience which the Board have had of the working of the new organisation during the past fifteen months, the Board are satisfied that the arrangement by which the scientific and administrative duties are assigned respectively to the professional and non-professional officers best qualified to perform them, and subject of course to the general control of the Board themselves, is a desirable one in the public interest.

With regard to the scientific work, I am to say that it is the intention of the Board to foster and encourage investigation by every means in their power, utilising, where necessary, the services of non-official members of the profession, as they have recently been glad to do in connection with the Committee of professional experts now engaged in the investigation of certain questions connected with Swine-Fever. With regard to the executive work, the Board will continue to avail themselves as much as possible of the assistance of local veterinary practitioners in the discharge of duties requiring veterinary knowledge for their proper performance.

The Board trust that your Council will see from the foregoing remarks that it is incorrect to measure their appreciation of the services of the veterinary profession merely by reference to the number and aggregate salaries of the officers permanently attached to the central office. If the inferences drawn by the Committee from the arrangements made in 1893 were correct, it would be to the Board a matter of the greatest possible regret, but this is certainly not the case The Board most cordially and fully recognise the great benefits which stockowners and the public generally have derived from the researches and work of veterinarians and they are satisfied that those benefits will not in any way be lessened, but that both private and official veterinarians will be in a position and be encouraged to extend their work and researches, under the arrangements now in force.

I am, Sir, your obedient servant,
T. H. ELLIOTT, *Secretary.*

ARTHUR W. HILL, Esq., *Secretary,*
Royal College of Veterinary Surgeons,
10 Red Lion Square, W.C.